

REMARKS

Claims 1-13 are pending in the application. Applicants acknowledge with thanks the Examiner's determination of allowable subject matter in claims 4-9. By this amendment, claim 13, Fig. 5, and the Abstract have been amended to correct informalities and clerical errors. Applicants believe the amendments made herein add no new matter. Reconsideration and reexamination of the application is respectfully requested in view of the amendments and the following remarks.

Applicants have identified a clerical error in Fig. 5 and have amended Fig. 5 accordingly. In particular, the reference numeral 56 has been corrected with the reference numeral 48.

The Abstract has been objected to due to inclusion of the title in the Abstract. The Abstract has been amended to remove the title, thereby obviating the objection. Applicants request withdrawal of the objection.

Claims 1-3 and 10-13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,459,955 to Bartsch et al. ("Bartsch"). The rejection is respectfully traversed.

As the examiner is doubtless aware, a rejection under 35 U.S.C. § 102(e) requires each and every element of the claims so rejected to be disclosed in a prior art reference. Applicant submits that the Bartsch reference does not disclose each and every limitation in claims 1-3 and 10-13 and, thus, is not an appropriate reference for a rejection under 35 U.S.C. § 102(e).

Bartsch discloses a movable home cleaning robot comprising a platform, a motive force attached to the platform to autonomously move the robot on a substantially horizontal surface, and a computer processing unit that delivers drive signals to the motive force to control movement of the robot. The robot further includes a cleaning implement. In a first embodiment, the cleaning implement is a nonwoven electrostatic, cloth cover (see col. 22, ll. 62-65). In a tenth embodiment, the cleaning implement is a vacuuming means, which can be supplemented by drawing the vacuum through an electrostatic cloth, or, alternatively, a conventional brush vacuum arrangement can be used (see col. 25, ll. 5-11). In a description of the control circuit comprising the central processing unit, the control circuit can optionally control the rotation of an optional drive motor for cleaning sweepers mounted on the robot (see col. 7, ll. 52-55). The

description of the control circuit is not provided in conjunction with either the first embodiment or the tenth embodiment.

Claim 1 of the present application calls for an autonomously movable home cleaning robot that includes, among other elements, a base housing, a sweeper aperture and a rotary driven brush mounted for rotation in the sweeper aperture for removing debris particles from the surface, a dust bin in communication with the sweeper aperture for receiving the debris particles removed from the surface, and a dusting assembly for removing dust from the surface to be cleaned and mounted to an underside of the base housing for removing dust from the floor.

Bartsch does not disclose a home cleaning robot having a sweeper aperture, rotary driven brush in the sweeper aperture, dust bin in communication with the sweeper aperture, and dusting assembly, as required by claim 1. As discussed above, Bartsch discloses the use of a dusting cloth as the cleaning implement; however, Bartsch does not disclose the dusting cloth or other dusting assembly in combination with a sweeper aperture, rotary driven brush, and dusting bin.

The Office Action refers to the Bartsch description of the control circuit controlling a drive motor for cleaning sweepers as satisfying the sweeping aperture and rotary driven brush limitations of claim 1. Firstly, the cleaning sweeper mentioned in Bartsch is not necessarily a disclosure of a rotary driven brush and is certainly not a disclosure of a sweeping aperture. A cleaning sweeper could be any type of device that performs a sweeping function for cleaning and does not inherently require a sweeping aperture. Numerous types of cleaning sweepers, including rotary driven brush sweepers, could be mounted to the robot in several manners that do not require a sweeping aperture, such as to the underside of the robot or on the sides of the robot. Thus, the cleaning sweeper does not reach the sweeping aperture limitation, and Bartsch does not disclose elsewhere a robot with a sweeper aperture. Secondly, even if the cleaning sweeper was a disclosure of the sweeper aperture and the rotary driven brush, Bartsch does not disclose using the cleaning sweeper in concert with the dusting cloth or other dusting assembly. The dusting cloth and other cleaning implements that might be construed as a dusting assembly are disclosed in embodiments separate from the cleaning sweeper. Bartsch provides no discussion of a robot employing the two cleaning implements in concert, which provides several synergistic advantages as described in the present application.

Referring now to the dust bin limitation of claim 1, the Office Action relies on the vacuum arrangement disclosure in Bartsch as meeting this limitation of claim 1 because, according to the Office Action, the vacuum arrangement would inherently have a dust bin, tray, or bag for keeping dust/debris. While Applicants agree that a vacuum arrangement typically has some type of receptacle for keeping dust/debris, a vacuum arrangement does not equate with a sweeping arrangement comprising a rotary driven brush in a sweeping aperture and a dust bin in communication with the sweeping aperture. A vacuum arrangement relies primarily on vacuum forces generated by a vacuum source to draw the dust and debris from the surface to be cleaned and typically into a dust separator as, for example, a bag filter. A conventional brush used in a vacuum arrangement functions to agitate a carpeted surface to free dust and debris therefrom for removal by the vacuum forces. In contrast, a sweeping arrangement having a rotary driven brush in a sweeper aperture and a dust bin relies solely on the action of the rotary driven brush to lift the dust and debris from the surface to be cleaned through the sweeper aperture and into the dust bin. Due to the inherent differences between these arrangements, the disclosure of a generic vacuum arrangement is not the disclosure of the claimed components of a sweeper aperture, a rotary driven brush in the sweeper aperture and a dust bin. Furthermore, even, assuming *arguendo*, that the Bartsch vacuum arrangement disclosure could be considered to be a disclosure of the dust bin in communication with the sweeping aperture, Bartsch does not disclose the claimed limitations of claim 1 which call for a sweeper aperture, a rotary driven brush in the sweeper aperture and a dust bin **and** a dusting assembly. The conventional brush vacuum arrangement is described as an *alternative* to employing a vacuum means that draws a vacuum through an electrostatic cloth.

In summary, Bartsch discloses neither a rotary driven brush in a sweeping aperture nor a dust bin in communication with the sweeping aperture, much less a rotary driven brush in a sweeping aperture and a dust bin in communication with the sweeping aperture in concert with a dusting assembly, as required by claim 1. Absent a disclosure of these features, Bartsch does not anticipate claim 1.

Further, claim 1 would not be obvious in view of Bartsch because Bartsch does not contemplate robot having a rotary driven brush in a sweeping aperture, and a dust bin in

communication with the sweeping aperture, and a dusting assembly. Bartsch does not contemplate in any manner employing a sweeping arrangement and a dusting assembly in concert. Claim 1, therefore, patentably defines over Bartsch.

Claims 2, 3, and 10-13 depend, directly or indirectly, from claim 1 and are patentable over Bartsch for at least the same reasons that claim 1 is patentable over Bartsch.

Claim 2 further defines over Bartsch as it calls for the dusting assembly to comprise a dusting pad for removably mounting the dusting cloth and mounted to the base housing for movement away from the base housing for service of the dusting cloth. In Bartsch, the dusting cloth is described as being directly mounted to the robot platform (see, for example, col. 22, l. 63 – col. 23, l. 10), not to a dusting pad mounted to a base housing for movement away from the base housing for service of the dusting cloth. The Office Action refers to col. 23, ll. 47-58 of Bartsch for a disclosure of the claimed dusting pad; however, this paragraph does not contain any discussion of mounting a dusting cloth or towel to a pad that is mounted to a base housing for movement away from the base housing for service of the dusting cloth. It therefore follows that Bartsch does not anticipate claim 2. Further, claim 2 would not be obvious in view of Bartsch because Bartsch does not contemplate mounting the dusting cloth to dusting pad mounted to a base housing for movement away from the base housing for service of the dusting cloth. Claim 2 is, therefore, independently patentable over Bartsch.

Claim 3, which depends from claim 2, specifies that the dusting pad to which the dusting cloth is mounted is removably mounted to the base housing. Building upon the remarks presented above for claim 2, Bartsch does not disclose a dusting pad for removably mounting the dusting cloth, much less such a dusting pad that is removably mounted to the base housing. Furthermore, claim 3 would not be obvious in view of Bartsch because Bartsch does not contemplate a dusting pad removably mounted to the base housing. It follows that claim 3 independently patentably defines over Bartsch.

Claim 10, which depends directly from claim 1, further defines over Bartsch by requiring the dust bin to be removably mounted to the base housing. As discussed above, Bartsch does not disclose the claimed dust bin, much less a removably mounted dust bin. If the Bartsch vacuum arrangement is considered to be a disclosure of the dust bin, there is no reference to a removably

mounted dust bin or other dust collector in Bartsch. The section (col. 23, ll. 47-58) referred to in the Office Action with respect to claim 10 is not related in any conceivable manner to a dust bin. Additionally, claim 10 would not be obvious in view of Bartsch because Bartsch does not contemplate a dust bin removably mounted to the base housing, and claim 10 is independently patentable over Bartsch.

Claim 13 depends directly from claim 1 and calls for the sweeper aperture to be positioned generally forwardly in the predetermined direction of movement with respect to the dusting assembly in the base housing. As discussed above with respect to claim 1, Bartsch does not teach using a sweeping arrangement in concert with a dusting assembly and, therefore, does not disclose positioning them in a particular manner, including the manner described in claim 13. The Office Action refers to col. 25, ll. 20-27, which merely states that the robot is provided with a dusting means and that the robot is trained to follow a particular path. This section does not address positioning a sweeper aperture relative to the dusting assembly. Thus, Bartsch does not anticipate claim 13, and claim 13 would not be obvious in view of Bartsch because Bartsch does not contemplate using a sweeper aperture with a dusting assembly and positioning them in a particular manner.

Serial No. 10/707,129
Filed: November 21, 2003
Page 12 of 12

Examiner: McDieunel Marc
Group Art Unit: 3661

It is respectfully submitted that the claims are allowable over the prior art of record.
Prompt notification of allowability is respectfully requested.

Respectfully submitted,

ERIC C. HUFFMAN ET AL.

Dated: May 3, 2007

By: /John E McGarry/

John E. McGarry, Reg. No. 22,360
MCGARRY BAIR PC
32 Market Avenue SW, Suite 500
Grand Rapids, Michigan 49503
616-742-3500

G0297485